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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/678,584

10/03/2003

Geoffrey B. Rhoads

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EXAMINER

LEE, CHEUKFAN

ART UNIT

PAPER NUMBER

2625

MAIL DATE

DELIVERY MODE

12/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/678,584	RHOADS, GEOFFREY B.	
	Examiner	Art Unit	
	Cheukfan Lee	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10 is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/18/08</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2625

1. Claims 1-17 are pending. Claims 1, 10, 11, and 13 are independent.

2. The terminal disclaimer filed August 18, 2008 has been approved.

The filing of the terminal disclaimer has overcome the obviousness-type double patent rejection set forth in the previous Office action.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9 and 11-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Wolff et al. (U.S. Patent No. 5,767,987), cited by Applicant in the IDS filed August 18, 2008.

Regarding claim 1, Wolff et al. discloses an embodiment that introduces pseudo-random shifts from row-to-row (col. 12, lines 26+). According to col. 12, lines 26-33, an image sensor array, which is understood to be a multiple sensor scanning array, is moved relative to the object in a pattern that includes a pseudo-random component.

Regarding claim 2, it is inherent that the shift of the sensor array (the pseudo-random component of motion) traverses a distance not more than one-half of a distance between two adjacent sensors of the array.

Regarding claims 3 and 5, the claim limitation is met by Wolff et al. see to col. 12, lines 26-33, refer to feature of “the drive” system, and lines 5-25.

Regarding claims 4, 6 and 7, the sensor array comprises a plural rows of sensor. Please refer to col. 12.

Regarding claim 8, see reason for claim 2.

Regarding claim 9, the image of the object produced by the scan data obtained by the shift or movement is enhanced compared to the case without the shift or movement.

Regarding claim 11, for the limitations from line 1 to line 6, see discussion for claim 1 above. Further, the limitation from line 7 to line 8 is also met by Wolff et al. because of the pseudo-random motion between the sensor array and the object being scanned. The claimed first sampling time and second sampling time correspond to before the shifting of the sensor array and after the shifting of the sensor array in the X-direction.

Regarding claim 12, the claimed direction not parallel to the line in which the sensor elements of the sensor array are arranged is met by the Y-direction of Wolff et al. (col. 12).

Regarding claim 13, different sets of memory locations are inherent in Wolff et al. for storing scan data from the array of photosensors (sensor array) and obtained before the shifting of the array and after each shift of the array, and associated random numbers that are related to locations of the array before and after each shift.

Regarding claim 14, as understood, Wolff et al. does not limit the number of shifting of the sensor array in the X-direction to be once. Therefore, a third set of scan data as claimed and the associated memory locations as claimed are inherent.

Regarding claims 15 and 16, the claimed calculating device that operates to yield final image data, which is the high resolution image data, is included in Wolff et al.

Regarding claim 17, the claimed limitations are included in Wolff et al. in the process of obtaining the high resolution image data.

5. Claim 10 is allowed.

6. The following is an examiner's statement of reasons for allowance:

Claim 10 is allowable because the output scan data of Wolff et al. does not a resolution equal to the optical scanning resolution but a resolution higher than the optical resolution.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

Art Unit: 2625

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheukfan Lee whose telephone number is (571) 272-7407. The examiner can normally be reached on 9:30 a.m. to 6:00 p.m., Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cheukfan Lee/
Primary Examiner, Art Unit 2625